

IN THE SPECIFICATION

Please substitute replacement sections for pages 6 and 7 of record. The replacement sections show the amended text using underlining for the added words with the deleted words struck out.

In addition, please substitute the first paragraph of pages 11 and 14 for the first paragraph of pages 11 and 14 of record. The first paragraph of pages 11 and 14 are attached and are shown as amended.

Please replace paragraphs 2 and 4 of page 6 as follows:

(Paragraph 2) For Example, in IS-95A 9600bps frame, only 21 bytes are encrypted/decrypted since the number of the information bits are 172 bits ($=8 \times 21 + 4$). At the information bits of 172 bits (1) if it's a full rate, all 171 bits (vocoder output) excepting the first 1 bit Format bit (0) are encrypted/decrypted, and (2) if it isn't a full rate (for example, $\frac{1}{2}$ rate, 80 bits), the bits, which corresponds to output of the vocoder, of the remaining 168 bits excepting the first 4 bits Format bits (for example, $\frac{1}{2}$ rate 1000), that is, only a part of the $\frac{1}{2}$ bits are encrypted/decrypted. However, when the amount of the calculations are too much to be encrypted/decrypted in a given time, only the part of them (for example, 8 bytes) are encrypted/decrypted. In addition, when the output of the vocoder 100 is a mute ($\frac{1}{8}$ rate), (which is different in size according to vocoder, and is usually discriminated through format bits) the encryption/decryption process may be omitted in order to prevent a repeated transmission of the same pattern or in or to prevent a noise. Using a software or a hardware, the encryptor 140 and decryptor 150 performs the encryption/decryption process every 20 ms after the vocoder completes the encoding.

(Paragraph 4) Fig. 2 shows a DES algorithm applicable to the present invention and Fig. 3 shows an illustrated single iteration in the DES algorithm of Fig. 2 using a 64 bits text and 56 bits security key. In this case, for example, assume that only the first 8 bytes of the 172 bits are encrypted/decrypted in a full rate. Then, the 64 bits plain text (for example, 01 23 45 67 89 ab cd e7) of Fig. 2 corresponds

Replace paragraph 1 of page 7 as follows:

(Paragraph 1)

to expresses the first 8 bytes which corresponds to pure output of the vocoder of the 172 vocoder packet information bits transmitted from the vocoder 100, and 56 bits key (for example, 01, 23, 45, 67 89 ab de) of Fig. 2 indicates a security key 160 which a sending and a receiving mobile are sharing. The 172 encrypted vocoder packet information bits are obtained by adding the remaining unencrypted 108 bits to the 64 bits cipher text (for example, c9 57 44 25 6a 5e d3 1d) from the encryptor 140 in front and back of the formal bits and the remaining vocoder output.

Replace paragraph 1 of page 11 as follows:

when the mute happens. However, in a variable rate when the mute happens, it is possible to easily check the mute status of the frame through format its of the vocoder packet without any special process. In this case, the encryption and decryption is not performed ~~the vocoder packet is treated at 1/8 rate when the mute happens, thereby easily checking the mute status of the frame without any special process.~~ Accordingly, a new logic is not needed for the implementation of the present invention.

Replace paragraph 1 of page 14 as follows:

Fig. 5 shows the flow diagram of the reception/decryption process according to a preferred embodiment of the present invention, at the receiver corresponding to the transmitter in Fig. 4. Referring Fig. 5, the reception/~~encryption~~ decryption process will be described in detail.